

## **III.L: Hazardous Materials**

## **L. Surface and Subsurface Conditions (Hazardous Materials)**

### **1. Existing Geological Conditions**

The Project sites are located within the Hudson Highlands geologic region, home to the area's most ancient rock formations. Underlying bedrock is composed of metamorphic and igneous rock identified as belonging to the Grenvillian formation formed during the late Precambrian and early Paleozoic age. This formation is predominantly comprised of gneisses.

A review of the regional bedrock geology (USGS Map 1-514-A - Engineering Geology of the Northeast Corridor Washington D.C., to Boston, Massachusetts: Bedrock Geology) in the vicinity of the site indicates that, the site overlies two bedrock lithologic units:

Gneiss: biotite-quartz-feldspar gneiss with associated migmatite, granulite, amphibolites, and granitic rocks

#### **a. Marble, crystalline limestone, and dolomite**

The overall Project area's topography slopes from east to west, with the lowest elevations existing along the Hudson River. The River Park Center site has a grade change of approximately 63 feet from the high point on Elm Street to 50 feet, the low point on New Main Street. This change in elevation also applies to the Saw Mill River that runs through the site. The Cacace Site, which essentially consists of bedrock, has a steep cliff in Waring Park. On the Larkin Plaza site, the Saw Mill River has a grade change of 12 feet from east to west. According to the environmental investigation worked performed on the Palisades Point site under NYSDEC oversight in 1998 – 1999, the site consists entirely of fill from ground surface down to at least river elevations (6 to 8 feet below ground surface "bgs") with native soils consisting of fine to medium sands with some silt and clay under the fill. More recent geotechnical investigation described in more detail below reveal bedrock is at depths of approximately 42-64' bgs.

#### **b. Soils- All Sites**

##### **(1) McLaren Geotechnical Investigation – River Park Center (including Government Center and Palisade Avenue Office Building) and Cacace Center**

The soils for the River Park Center and Cacace Center sites are classified as Urban Fill (Uf on the Westchester County Soils Map) and are recognized as completely disturbed soils with a base constituency of Charlton Association soil-type. While there is some fill on the Cacace Site, the depth of the fill is very shallow. Subsequent environmental investigation of Cacace revealed that there is little fill or soil on this site. The soil profile varies throughout the sites, but can be generalized as being surface fills of various compositions underlain by glacial-type tills mixed with cobbles and boulders with diameters ranging from six to forty-eight inches. This under-layer continues to bedrock.

A preliminary subsurface investigation on the River Park and Cacace Sites was conducted by Jersey Boring and Drilling Company under the direction of

McLaren Engineering Group (Preliminary Geotechnical Report, dated January 30, 2007, prepared by McLaren Engineering Group of West Nyack, NY; hereinafter "McClaren Geotechnical Report"). Twenty-two borings were performed between September 22nd and October 11th, 2006. Borings were taken using a wet rotary drill rig with casing and bedrock coring were a minimum of 60 inches. Due to the rocks and boulders and the number of obstructions encountered during the drilling, split-spoon soil sampling was not possible.

Boring locations were chosen to provide representative subsurface conditions within the River Park Center (including Government Center and Palisade Avenue Office Building) and Cacace Center sites (See Boring Location Plan, Exhibit III.L-1). The subsurface strata encountered include the following:

Asphalt/Pavement- Most of the borings were located in pavement areas and encountered approximately 6-inches of asphalt pavement.

Prior fill and demolition debris- In areas of prior buildings (within the area adjacent to Palisade Avenue, the municipal parking lot at Ann Street and the Cacace Justice Center parking lot) concrete, wood, rebar was encountered between 1 and 10 feet below existing grade.

Glacial Till- Boulders cobbles and soil/silt was encountered at depth of up to 85 feet below the surface. This material was extremely difficult to drill through and required drilling through boulders with diameters of six to forty-eight inches.

Bedrock- Bedrock was encountered at depths from 3 feet to 85 feet below the surface. Rock cores were obtained for all borings.

Groundwater was encountered in most borings. The depth below the ground surface varied from 3 to 19 feet. Within areas adjacent to the Saw Mill River, the groundwater elevation generally corresponds to the bottom of the riverbed.

A summary of the boring results are provided below:

**Table III.L-1  
Soil Boring Results**

Boring Number	Surface El. (Approx.)	Depth to Bedrock	Bedrock Elevation	Comments
4	55	70	-15	
5	59	25	34	GW @ El. 53
6	63	28	35	GW @ El. 53
7	61	44	17	GW @ El. 49
8	52	55	-3	
9	56	30	26	
10	66	10	56	GW @ El. 58
11	59	75	-16	GW @ El. 53
12	63	60	3	GW @ El. 60
14	74	>55	<20	GW @ El. 56
15	65	22	43	GW @ El. 58
16A	65	>20	<45	GW @ El. 63
19	102	85	17	
22	61	30	31	GW @ El. 51
23	107	20	87	GW @ El. 102
24	72	13	59	GW @ El. 67
25	111	15	96	
26	118	3	115	GW @ El. 112
27	120	20	100	GW @ El. 101
28	122	15	107	
29	112	35	77	GW @ El. 98
30	131	10	121	GW @ El. 128

Source: McLaren Engineering Group

(2) SESI Remedial Investigation of the River Park Center Site

Since the preparation of the initial draft DEIS, SESI has completed a Remedial Investigation (RI) of the River Park Center Site, which essentially confirmed the findings of the McLaren Geotechnical Report of existing geologic conditions. SESI extended borings to depths ranging from 8 to 40 feet below ground surface (bgs). A significant amount of cobbles, boulders and rubble was encountered in the upper 10 to 20 feet of the site. Drilling to facilitate monitoring well installation was difficult, even when using a relatively large air powered rotary drill rig.

The SESI RI boring logs, coupled with the McLaren Geotechnical Report, reveals the following site stratigraphy of the River Park Center Site (from the top to the bottom):

- Fill: man-made fill extending to depths of about 5-feet to 28-feet, was encountered throughout the site and was predominantly, gray to brown sand with a little gravel, a little silt with fragments of brick/wood/concrete.
- Glacial Till: encountered below the fill and extending to a depth of about 85' bgs, consisting of gray to brown sand, with a little gravel, a little silt with numerous cobbles and boulders.

- Bedrock: generally present beneath the glacial till, bedrock was encountered at depths ranging from 3' to 85' bgs.

Struever Fidelco Cappelli, LLC, (SFC) entered into a Brownfield Cleanup Agreement (BCA), as a Volunteer, with the New York State Department of Environmental Conservation (NYSDEC) on December 12, 2006, to investigate and remediate the 12.95± acre River Park Center site.

To investigate impacts to the soil, groundwater, soil gas, surface water and sediment within the site, various remedial investigative activities were completed in August and September, 2007, in accordance with a NYSDEC approved Remedial Investigation Work Plan. Additional groundwater and soil samples were performed in November 2007 to further delineate the impacts in accordance with a request by the NYSDEC. A Remedial Investigation Report (RIR), which summarizes the finding of the complete Remedial Investigation, was submitted to the NYSDEC for approval in December 2007. Based on the RIR findings, a Remedial Action Work Plan (RAWP) was also developed for the site to outline the recommended remedial measures for the River Park site and submitted to the NYSDEC for their approval in December 2007.

The proposed re-development plan includes construction of a bypass culvert to temporarily re-route the Saw Mill River during the site development. When the site development is complete, this bypass culvert will serve as a permanent over-flow channel for the river. The redevelopment plan also proposes to relocate, day-light and refurbish a portion of the Saw Mill River. Since these portions of the site are contaminated, these activities will be addressed under NYSDEC and NYSDOH oversight in a manner consistent with the approved RAWP. The Remedial Actions related to the Saw Mill River are expected to include:

- Prior to the installation of the bypass culvert, grossly contaminated soil and groundwater will be removed from the area of the proposed culvert. Post-excavation samples will be collected after the removal of the soils to evaluate the performance of the clean-up with respect to attainment of the required Soil Cleanup Objectives (SCOs) outlined in the NYSDEC approved RAWP.
- Once the by-pass culvert has been completed, the contaminated sediment in the Saw Mill River will be removed in accordance with the NYSDEC approved RAWP.
- Prior to the relocation of the Saw Mill River, the proposed river-bed will be cleaned in accordance with the NYSDEC approved RAWP before being reconstructed to prevent migration of contaminants to the surface water.

(3) S&W Redevelopment Phase II Investigation of the Cacace Center Site

Since preparation of the initial draft DEIS, S&W Redevelopment performed a Phase II investigation of the Cacace Center Site. Bedrock was encountered immediately below the ground's surface. Unlike the River Park Center site, which is a large depression that has been filled by glacial till predominantly consisting of boulders and man-made fill on the surface, the Cacace Center Site was essentially not filled, and predominantly consists of bedrock.

(4) Palisades Point McLaren Geotechnical Investigation & NYSDEC Bond Act 1997-1999 Investigation and Remediation Project

The recent McLaren geotechnical field investigation included drilling seven soil test borings spaced throughout this site biased towards the area of the proposed buildings. The subsurface stratigraphy encountered in the borings generally consisted of fill and organic soils underlain by very dense glacial till. The fill varied from about 14 to 17 feet thick along the eastern (inboard) portion of the site and from about 17 to 27 feet thick along the western (outboard) portion of the site. The depth to the bottom of the organic stratum/top of glacial till was about 25 to 31 feet along the eastern portion of the site and about 37 to 48 feet along the western portion of the site. Bedrock was encountered beneath the glacial till at depths ranging from about 42 to 64 feet below the surface. Groundwater was observed at depths ranging from approximately 7 to 8 feet below the surface. Soil conditions for the Palisades Point site is classified as Uc-Udorthents according to the Westchester County soil survey. Udorthents consists of very excessively drained to somewhat poorly drained soils that have been disturbed, generally by cutting or filling, in areas of urban development.

A Bond Act investigation and remediation project was performed on this site from approximately 1997-1999. The investigation revealed the existing soils principally consisted of fill soils. Hot spot areas of contaminated soils were delineated and excavated but fill soils continue to constitute the majority of soils remaining on the site.

(5) Larkin Plaza

Larkin Plaza has not yet been subject to a soil investigation. However, the site was highly disturbed during the flume construction; therefore, it most likely consists of fill soils.

2. Existing Hazardous Materials Conditions

a. River Park Center Site

The River Park Center site has been developed since at least the mid 1800's with a large variety of industrial uses, including hat factories, a tannery, a chemical dye facility, brewery and contractor's yard. Other smaller buildings within the interior of the site historically included garages, carpenter shops, auto repair businesses, wagon sheds, a laundry business, and many other commercial uses. Most on-site structures were demolished sometime between 1942 and the late 1950's, and replaced with the

current parking lot, which covers most of the site. The remainder of the site consists of retail stores along New Main Street, some of which are deteriorated. Several additional businesses exist along the Nepperhan Avenue side of the site as well as the City Fire Department Headquarters and a gas station along School Street.

According to historic Sanborn Fire Insurance maps, the history of the site is summarized as follows:

*1889* - A portion of the site was an island surrounded by the waters of the Saw Mill River. This portion of the site is occupied by the Waring Hat Factory and Yonkers Brewery and other brick and wood structures, horse stables and sheds. The properties along the perimeter of the site are one, two, and three story wood and brick structures. Included are a fire engine house and a hardware store. The interior portions of the site also have one, two, and three story wood and brick structures, including additional hat factory related buildings, a Bottling Works Company, tannery and chemical dye facility.

*1908* -The water body on the north side of the island was filled. Most of the buildings/structures are similar to the 1889 map.

*1917* - The portion of the Saw Mill River located in the northwestern vicinity of the site is covered with reinforced concrete. The Yonkers Brewery is still in operation with buildings for storage, a machine shop, coal bins and bottling. The Hat Factory has been demolished and the land formerly associated with the Hat Factory is undeveloped. The interior of the property is being used for a garage, carpenter shops, auto repair businesses, wagon sheds, a contractor's yard, a laundry business, a bakery and retail businesses.

*1942* - Many of the buildings depicted along New Main Street and Palisade Avenue are still present today. The Yonkers Brewery became the State Cereal Beverage Company at this time.

*1957, 1971, 1973, 1978, 1989 and 1991* - the site appears mainly as it does today. Between 1942 and 1957, most of the former industrial buildings were razed and the existing parking lot was constructed.

A review of the adjacent site uses reveals, with the exception of a gas station on Elm Street, and an upgradient dry cleaner on Nepperhan Avenue, none of the adjacent site uses are likely to be impacting the River Park Center Site.

As a result of well over one hundred years of commercial and industrial use, this site met the definition of a "brownfield". The State of New York defines a brownfield site as "any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant."

Based on research done in the planning phases of this Project, it was determined that many, if not all, of the more than fifty parcels included in the River Park Center site had evidence of past industrial/commercial activities that were likely to have resulted in site contamination.

Since the preparation of the initial draft DEIS, a detailed Remedial Investigation (RI) of the Site has been conducted by SESI, which confirmed the presence of petroleum, solvents (or chlorinated volatile organic compound CVOCs), semi volatile organic compound (SVOCs), metals (most notably mercury), PCBs and pesticide contamination.

The extent of each contaminant type has been delineated in discrete areas:

<u>Site Media</u>	<u>Area of Impact</u>
Soil	Throughout the Site
Groundwater -	
Petroleum in Shallow Water	Northern Portion of Site
CVOCs in Shallow Water	South east and Southern Boundary of Site
CVOCs in Deep Water	South east and Southern Boundary of Site
PCBs	South east corner
Metals	Throughout the Site
Pesticides	Northern/Northeastern part of the Site
Soil Vapor	Minor Exceedances Northern Portion of Site
Sediment (Metals and Pesticides)	Throughout Sediment

The use of petroleum products on the parcels, as with many commercial/industrial areas, was ubiquitous, but has been principally found in the vicinity of a gas station in the north section of the Site. Parcels in this vicinity maintained petroleum underground storage tanks (USTs). Parcels on the west side of the site, which have not been extensively sampled to date since these parcels are still occupied, also have existing USTs for heating oil purposes. Generally speaking, a high percentage of unprotected bare steel tanks across New York State containing petroleum leak either through corrosion of the tanks or the piping.

Solvents or CVOCs that have been discovered in the south east and southern property boundary of the Site during the RI. Solvents could have been used on a number of parcels for degreasing equipment or for the dry cleaning of clothes. A former laundry did exist on the Site.

With respect to the metals contamination discovered, most notably mercury, or specifically mercurious nitrate, was used in large quantities during the process of making felt from animal fur. The City of Yonkers was historically known as a center of hat manufacturing during the 19<sup>th</sup> century and up until the middle of the twentieth century. Most of that activity occurred within the boundaries of the River Park Center Site. Therefore, the discovery of mercury in soil and groundwater was expected and is generally present throughout the Site.

Finally, SVOC contaminants were found discovered in historic fill materials, which were pervasive throughout the site.

The suspected presence of the contaminants, which have now been fully delineated, made this Site eligible for inclusion in the voluntary Brownfield Cleanup Program (“BCP”). The BCP is a structured program beginning with a site remedial investigation (the “RI”) to determine the nature and extent of contamination that might adversely impact human health or the environment. As noted above, the RI has been performed subject to an approved work plan that was subject to public comment describing an approach to evaluating site contamination. This plan was also reviewed and approved by the NYSDEC and New York State Department of Health (NYSDOH), and has now been fully implemented.

Following a thorough investigation of the nature and extent of contamination, remedial options are evaluated in a Remedial Action Work Plan, which is also subject to NYSDEC, NYSDOH and public comment. Once approved, the selected remedy is implemented to reduce or eliminate contamination. The agreed upon remedy is implemented with the oversight and approval of NYSDEC and NYSDOH. Once appropriate remediation is completed, any necessary engineering controls or use restrictions are recorded in an environmental easement that runs with the land. The NYSDEC includes a certificate of completion once all of the work is done, which provides a release from liability relative to any contamination remaining on site that is being managed and maintained in accordance with the easement and a Site Management Plan. The steps in the process are generally described in Table III.L-2. The Applicant is classified as a “volunteer” under the BCP, a classification that reflects the Applicant’s status as an innocent purchaser not responsible for causing the contamination, but who is willing to clean it up in accordance with the prescriptive rules of the BCP.

**Table III. L-2  
Steps in the BCP**

BCP Required Work Plan/Final Report	Associated Public Notice
<b>Remedial Investigation Work Plan - describes work anticipated to identify the nature and extent of contamination on the site</b>	Fact Sheet and 30 day Public Comment Period
<b>Interim Remedial Measures Work Plan - describes the work anticipated to properly excavate and remove contaminated material on the site for the purpose of facilitating the investigation</b>	
<b>Final Remedial Investigation Report - summarizes the nature and extent of all on-site, and if required, off-site contamination on and migrating from the site</b>	Fact Sheet and 30 Day Public Comment Period
<b>Draft Remedial Action Work Plan - describes the anticipated remedial work necessary to cleanup the site to either Track 1 unrestricted levels, or Use Based Track 2-4 levels, and includes an alternatives analysis if Tracks 2-4 cleanup levels are selected</b>	Fact Sheet and 45 day comment period
<b>Final Engineering Report (FER) and Request for Certificate of Completion (COC) and Site Management Plan (SMP), if institutional and/or engineering Controls (ICs/ECs) are required - FER describes all work that was performed on the site and the SMP is the document that describes all future work necessary to maintain safe conditions on the site for those sites where Track 1 cleanup standards could not be achieved</b>	Fact Sheet noticing the FER and COC Request
<b>Issuance of Certificate of Completion, and Notice related to ICs/ECs, if part of the remedy</b>	Fact Sheet noticing COC issuance and 10 day comment period if ICs/ECs are part of the remedy

The Remedial Investigation Report (RIR), which has recently been prepared and has been released for public comment, fully describes the types of hazardous substances encountered, the pathways by which humans and ecological receptors could be exposed to these contaminants and ultimately the means by which these pathways can be reduced or eliminated to levels that are protective. Further, the RIR provides details on a Human Health and Ecological Exposure Assessment (refer to Appendix Volume 3 of this DEIS) which evaluates potential exposure pathways using vapor intrusion sampling wells, soil borings, groundwater samples and surface sediment/surface water sampling. As part of the ongoing coordination with NYS DEC on the brownfields cleanup program, a site specific Health and Safety Plan will be prepared which will address exposure potential during the construction period.

- After the investigation was fully completed in November 2007, there was enough information about site contamination to finalize the Remedial Action Work Plan (“RAWP”). The Remedial Action Work Plan was submitted in December 2007

summarizing the proposed cleanup remedy for the site and is also subject to approval by NYSDEC, NYSDOH and public review and comment. The RAWP the preferred remedy as well as other options that exist to clean the site up to levels that are protective of human health and the environment. Based on the known contamination to date, a Track 4 remedy has been proposed as the preferred remedy.

Due to the size and complexity of this Site, the cleanup process is likely to be conducted concurrent with the initial phases of river re-construction. The Remedial Action Work Plan (RAWP) includes procedures on how the contaminated media encountered during excavation should be properly managed. The RAWP includes a health and safety, community air monitoring and site operations plans to address and mitigate any potential environmental exposure issues to the community and site workers. The Remedial Engineer is responsible for ensuring that these plans are implemented during site remedial activities.

b. Cacace Center Site

The Cacace Center site had a number of suspect environmental areas of concern documented in a Phase I Site Investigation Report prepared by S&W Redevelopment based on its history dating back to at least the late 1880's according to historic Sanborn maps:

1890 - A Yonkers High School was present on the northwest corner of this Site. Sometime thereafter, a High School Annex was developed. This Annex likely housed what later became known as the Saunders trade school.

1917 - The Saunders Trade School, which is still present on the adjacent site, first appears. The 1917 map still shows the High School Annex as well. The J. H. Schmidt Copper & Brass Works facility and an auto painting facility are present on the north east portion of the Site along a former street known as Radford Place, which used to transect that portion of the Site. [NOTE: This street was eliminated when the parking lot was created and is now part of Lot 21.

1942 - The Saunders Trade School was expanded on the adjacent site. In 1951, an auto repair facility has replaced the auto painting facility. The Copper works facility structure is still present, although the industrial user is not clearly identified.

1956 - Another auto repair facility is present near the northern boundary.

1957 - An electronics manufacturing facility is present on the north east portion of the Site, south of the auto painting and repair facility building along the former Radford Place. The Yonkers High School and Annex buildings are no longer present on the 1957 Sanborn map. The north east corner is essentially vacant through the 1991 Sanborn Maps. This corner was converted to Waring Park, but due to the slope, is not accessible at all along Nepperhan Avenue, but is accessible along New Main Street where there are some park benches. However, the slope of this park has made it highly unusable.

1971 - The Saunders Trade School added a completely new building on the southern portion of the Site, north of the existing Saunders Trade School complex. This Annex is marked as the "Auto Shops" and "Automatic Heat's Shop". An interview was conducted with the owner's representative named Mr. Valenti by S&W Redevelopment, who indicated that machine shops and metal working activities occurred in Annex during this period.

1978 - The electronics facility was present on the Site at least through at least 1978, but this building is marked vacant on the 1989 map. Therefore, between 1978 and 1989 the electronics manufacturing operation ceased.

1990- All of the Site structures were demolished between the 1950's and late 1990's. Those demolished earlier in the late 1950's included the High School, which was replaced with Waring Park. The 1970's Annex was demolished and replaced with the current parking lot, which takes up most of the Site today.

None of the adjacent site uses are likely to be impacting the Cacace site. This site is surrounded by residential and commercial store uses without histories of industrial past. The River Park Center Site investigation did not reveal evidence of significant off-site contamination and groundwater flow is west, not in the direction of the Cacace Site.

Potential contamination associated with the former Saunders Trade School Annex, where a large auto repair training facility was located, and the former electronics facility were suspected. However, a subsequent Phase II investigation performed on the Site did not reveal any significant levels of contamination or source areas. The Phase II investigation results led NYSDEC to conclude the site was not a brownfield.

In addition, as noted above in the previous geology section, this Phase II investigation revealed very little soil being present on the Site, which mainly consists of bedrock.

At this time, no additional investigation or future vapor mitigation is known to be required at this Site. However, if during site excavation activities during construction, contamination is discovered, then a renewed application can be made for participation in the BCP. At that time, appropriate health and safety, community air monitoring and site operations plans would be developed to address and mitigate any potential environmental exposure issues to the community and site workers. At this time, no exposure issues are anticipated and a general construction Health and Safety plan will apply.

c. Palisades Point

The Palisades Point site, also known as the approximately 4.5 acre "Parcels H and I" (hereinafter the "Site") in the City of Yonkers Downtown Waterfront Master Plan, was investigated in a Phase I Environmental Site Assessment Report prepared in April 1997 by AKRF, Inc. The Phase I Report revealed the site has not historically

been the location of any buildings. The site was historically used for landfilling activities. Test pit excavations conducted during a Bond Act Environmental Restoration Program investigation of the site performed by the City in 1998 and 1999 revealed a variety of construction and demolition waste, including sand and gravel fill with concrete, plastic wire casing without copper, metal piping, asphalt, coal ash, and steel reinforced concrete. The presence of the plastic wire casing was believed to be evidence of industrial waste from the wire drawing mill which operated on a nearby parcel through the early 1970s. Therefore, with respect to this site, it appears an adjacent industrial use did contribute contamination to the site.

Subsequent investigation activities revealed the Site was contaminated with pesticides (most notably dieldrin, a listed hazardous waste), metals (most notably, lead present at hazardous waste levels, as well as arsenic, mercury and copper), PCBs (present at relatively low levels), petroleum and other polyaromatic hydrocarbons [most notably bis(2-ethylhexyl) phthalate] formed during the burning of coal, oil, gas, wood, tobacco, rubbish and other organic substances.

The City of Yonkers' Community Development Agency ("CDA") entered the NYSDEC Environmental Restoration Program through the 1986 New York State Bond Act. The CDA completed an investigation and remediation program for the site with the NYSDEC issuing a Record of Decision (ROD) in October 1999. The implementation of the remediation plan was completed, resulting in the removal of source areas of hazardous waste soil contamination on the Site and two feet of clean soil cover cap in vegetated areas of the Site. This remedy allows for restricted residential development on the site. This means that residential development is permitted assuming certain institutional and engineering controls are implemented. These controls include, but are not limited to, a prohibition on the use of on-site groundwater and a two-foot clean soil cap on exposed soils on the site after redevelopment.

However, the final approval document (i.e., a Certificate of Completion) has not been issued, despite the fact that all on site cleanup work is complete. This is because fill soils from an adjacent Bond Act site were placed on surface of the ground of the site for temporary storage. Written approval has been obtained from the NYSDEC to reuse that fill soil material on the BCP approved ATI site north of Palisades Point on Alexander Street after remedial site excavation occurs on that site.

The Certificate of Completion for Palisades Point will be issued following the relocation of the fill soils to that site. Future site excavation activities of the remaining fill materials on the site will be conducted in accordance with the ROD. Exposures are not anticipated since the Site has been remediated of all hazardous waste. However, historic fill remains on site. Site restrictions for the site include a restriction on the use of groundwater. A vapor mitigation system was not required for this Site as part of the ROD and VOCs were not a major contaminant of concern at this Site. Therefore, while a vapor investigation may be voluntarily performed after

site excavation occurs to confirm that vapor contamination is not present, vapor mitigation is not likely to be required at this Site.

d. Larkin Plaza

The Larkin Plaza site consists of the land between Dock Street to the North, Nepperhan Avenue to the South, and Buena Vista Avenue to the West and proceeds east to a “v”-shaped point at Warburton on the East side of the site. Neither a Phase I nor Phase II environmental investigation has been performed on the Larkin Plaza Site. While a full nature and extent investigation of the Larkin Plaza site is expected to proceed, since this Larkin Plaza site will remain City owned, such investigation while proceed on a different track in the near future. A remedy, if any, for existing hazardous conditions, if any, will not be known until an investigation proceeds.

However, a review of a series of historic Sanborn fire map of the site, typically reviewed during the preparation of a Phase I report, reveals a number of industrial uses that create the suspect presence of contamination. These uses included machine shops, auto repair shops, metal workings facility, a chemical plant, and a number of underground storage tanks. A gas holder and gas works, typically associated with a turn of the century manufactured gas plant site, and coal yard, were immediately adjacent to the south, and may have caused contamination on this Site.

In 1886, the Site was occupied by various machine shops on the western side of the Site. The Site was split in the middle by the exposed Saw Mill River called the Nepperhan River at that time. There was a walking bridge over the river linking the West side of the Site to the East side. On the East side of the Site was a company named Reed & Carnick Chemical Works Site. There is a note that the facility “burned on June 16, 18\_\_.” The year is not clearly legible but could read 1865. Various other uses are present not clearly legible including a foundry next to this portion of the Site. Some dwellings were present on the eastern most portion of the Site.

By 1917, the western portion of the Site is now occupied by the Yonkers Fire Department Repair shop, and other auto repair and machine shops. A retaining wall is noted to be present to the North along Dock Street. This wall was likely constructed to support an unnamed street that has been constructed over the Nepperhan River. A foundry also appears to be present on the site. The gas holder is still present to the south. The eastern portion of the Site is occupied by a fur storage business where the former chemical plant was located but is still marked as vacant. Plumbing and metal working uses, along with a variety of miscellaneous industrial uses are also present. No dwellings remain on the Site.

By 1926, pursuant to a Special Ordinance of the City Council 1926-56, the City of Yonkers acquired for public or municipal purposes, Larkin Plaza Park consisting of Block 2005, Lot 1. In 1928, the Park is named after Mayor Thomas F. Larkin.

By 1951, an open space plaza and parking occupy the western portion of the Site. The current Post Office building occupies the portion of the site previously occupied by the gas holder. A gas station is present on the corner of Market Street and Nepperhan Avenue. The former foundry is now a filling station, garage and laundry. These three uses are still present in the 1957 map.

In 1964, the City entered into an Agreement with the Yonkers Parking Authority (YPA) to use most of the Site for YPA parking purposes. YPA subsequently issued bonds under the YPA Act and redeveloped the site as a parking lot.

The history of the site suggests that it would be an eligible brownfield for the BCP. If the site were admitted into the program, vapor sampling would be performed, and depending on the presence of VOC contamination, vapor mitigation may be required. Health and safety, community air monitoring and site operations plans will all likely be required for future sub-surface site work.

### 3. Anticipated Impacts

#### a. Short Term Impacts

Implementation of Brownfield Cleanup Program requirements has significant long term positive environmental impacts. The process of cleaning up any contamination problems may produce short-term potential impacts that must and will be mitigated.

#### b. Remediation Activities

River Park Center - The proposed remedial activities are included in the Remedial Action Work Plan (RAWP), which was presented to the NYSDEC and NYSDOH in December 2007. While the final remedy is not yet approved, the remediation activities anticipated to be undertaken at River Park Center include:

- Remove identified contaminated soil source areas that could be impacting groundwater and prevent direct contact with remaining residual contaminated soil;
- Eliminate or mitigate on-site environmental and public health exposures to on-site contamination that may remain in soil, groundwater and soil gas;
- Prevent contaminants from volatilizing through the soil from groundwater by the installation of a vapor mitigation system in each on-site building;
- Ensure site contamination does not impact existing surface water quality in the Saw Mill River;
- Provide restriction upon groundwater use;
- Ensure site redevelopment does not impact existing surface water quality;
- Remove and prevent direct contact with contaminated sediments in the Saw Mill River; and
- Prevent off-site migration of on-site contamination.

Essentially, the preferred remedy includes soil source removal of contaminated soil that could be impacting groundwater, a site-wide capping containment system through building foundations and clean soil cover in landscaped areas, removal of

contaminated sediments in the existing river bed and in the relocated river bed, construction methods around the new relocated river that prevent site contamination from entering surface water and a vapor mitigation system to protect indoor air in all on-site buildings.

Groundwater remediation at the site will rely on removing USTs, LNAPL, and associated soil contamination, which are viewed as the principal on-site sources of potential contamination to groundwater. Contact with groundwater following redevelopment is precluded by the fact that the site will be supplied by a municipal water source, and continued groundwater monitoring to confirm success of these source removals. Based on the groundwater data, the flow direction is west and contaminated groundwater from the site does not appear to negatively impact off-site areas.

The associated short term impacts are summarized as follows:

(1) Soil and Source Removal

Soils contaminated at levels requiring removal will require excavation and off-site disposal, which may create dust and other nuisances. In addition, there may be discrete sources such as leaking underground storage tanks that will be removed along with their contents, and appropriately disposed of off-site. As the site is excavated for building foundations, soils will be tested to determine whether they are contaminated or not, in accordance with a process that will be approved by NYSDEC. As necessary, soils, rocks and old foundations will be removed from the site and disposed of at appropriate off-site facilities.

(2) Groundwater

No uncontrolled contaminated groundwater will be allowed to be discharged either back to the ground or to surface water. Therefore, contaminated groundwater, if encountered during excavation activities will have to be managed.

(3) Surface Water and Sediment

The Saw Mill River traverses the River Park Center site. Most of the course of the river across the River Park Center site is channelized. A portion of the river is presently covered over. Historically, the river had a split or dual channel through this site forming an island commonly known as "Chicken Island." Long after the one channel was filled in, the area continued to be known as Chicken Island. As part of the Brownfield Cleanup Program, the river and its sediments were be tested to determine whether there is contamination in the river, The surface water in the river did not exhibit any significant contamination. River sediments were contaminated principally with pesticides likely used for rodent control and some metals which may have originated from the site. This sediment will be removed to the extent practicable when the river is moved and rechanneled. However, the site contamination does not appear to have had a significant effect on the river.

**Table III. L-3  
Parcel Historic Use and Contamination within the BCP Site**

Lot #	Block	Address	Phase I	Findings	Historic Information from Sanborn Maps	Phase II	RI Findings
1	475	58-70 Elm St.	Yes	Historical and current gasoline station and auto repair operations located on property. Suspect exterior storage yard located on property.	Historically this lot housed a hat manufacturer (1886-1917).	Yes	Petroleum and metals groundwater contamination.
9 & 19	475	78 & 90 Elm St.	Yes	Historical industrial operations located on property.	This lot housed a leather manufacturer and a tannery (1886), as well as a curtain manufacturer (1951-1956); and chemical dye manufacturing (1971-1991).	Yes	Metals, VOC, SVOC and pesticide contamination.
22	475	105 Elm St. / 197 Nepperhan Ave.	Yes	Suspect asbestos containing material located on property. Suspect inactive underground storage tanks located on property.	There are no structures in Sanborn maps that indicate these contaminants.	Yes	SVOCs in Soil confirmed.
59 44 50 51 55	475	32 John St. School St. 38 School St. 44 Ann St. Ann St.	Yes	Suspect exterior drum storage area on property Suspect underground storage Gasoline station located near property Hazardous waste generation listed on property Suspect closed NYSDEC spills listed on property	These lots once housed a hat manufacturing facility (1886-1917).	Yes	Mercury and petroleum contamination

*Surface and Subsurface Conditions*

<b>Lot #</b>	<b>Block</b>	<b>Address</b>	<b>Phase I</b>	<b>Findings</b>	<b>Historic Information from Sanborn Maps</b>	<b>Phase II</b>	<b>RI Findings</b>
64 & 65 66 67	475	33 John St.  35 John St.  37 John St.	Yes	Gasoline station located North of property Auto repair and auto body repair located on property Suspect underground storage tank on property Gasoline station located North of property	These lots once housed a hat manufacturing facility (1886-1898).	No	Metals and petroleum groundwater contamination.
25 & 26	475	195, 193 Nepperhan Ave.	Yes	Suspect asbestos-containing material on property.	Former laundry shop (1917) and sheet metal shop (1951).	No	CVOCs groundwater contamination
5	483	155 New Main St.	Yes	Suspect asbestos-containing material on property.		No	Underground Storage tanks (UST) related petroleum contamination may be found during Site excavation work
16, 13, 12, 10	483	135-145 New Main St.	Yes	Suspect asbestos containing material located on property Suspect inactive underground storage tanks located on property	These lots once housed a leather manufacturer (1886-1898).	Yes	UST related petroleum contamination may be found during Site excavation work
55, 56, 57	484	125-119 New Main St.	Yes	Suspect asbestos-containing material on property Hazardous waste generation identified on property	These lots once housed a leather tannery and dye shop (1886-1898).	No	M. UST related petroleum contamination may be found during Site excavation work
53 & 51	484	127-131 New Main St.	Yes	Suspect asbestos-containing material on property NYSDEC closed spill and suspected underground fuel oil storage tank located on property	Possible historic contaminants from the presence of a harness shop (1886-1898) on the Sanborn maps.	No	Metals and SVOCs contamination. UST related petroleum contamination may be found during Site excavation work

*Surface and Subsurface Conditions*

Lot #	Block	Address	Phase I	Findings	Historic Information from Sanborn Maps	Phase II	RI Findings
1,2,3	485	12-18 Palisades Ave.	Yes	Suspect asbestos-containing material on property	Historically there was a hardware and tinsmith shop (1886-1898) located on this lot.	No	No findings specific to this site
4 & 6	485	20 & 24 Palisades Ave.	No			Yes	Petroleum, metals & pesticide contamination
7	485	26 Palisades Ave.	No		Historically there was a tire shop (1951-1956) on this site	No	Metals contamination
8	485	28 Palisades Ave.	No		Historically there was a tire shop (1951-1956) on this site	Yes	Metals contamination
10	485	32 Palisades Ave.	No		There was an auto repair shop (1951-1956) located on this site.	Yes	Metals contamination
12	485	36 Palisades Ave.	No	There are underground storage tanks (USTs) on this site		No	Petroleum & metals contamination
14	485	40 Palisades Ave.	No			Yes	Metals contamination
16	485	46 Palisades Ave.	No			Yes	Petroleum & metals contamination
18	485	48 Palisades Ave.	No		There was an auto repair shop located on this site (1951-1956)	No	Petroleum, metals & pesticide contamination
15	486	23 John Street	No			No	
16	486	25 John Street	No		Historically there was a tin shop and a laundry (1917) on this site.	No	Petroleum, metals & pesticide contamination
53	475	46/78 John Street	Yes	Floor drain on property	Former chemical dye manufacturing (1964-1989).	Yes	CVOCs and metals Contamination
70	475	45 John Street	No		Former chemical dye manufacturing part of hat manufacturer (1886-1951) and later a curtain factory (1956-1956).	No	SVOCs and metals contamination .
5 & 8	484	2 & 8 James St	Yes	Visual evidence of a UST, and area possibly contains metals and mercury	Historic clothing and carpet manufacturing (1886-1898) and possible use of dyes and location of a hat factory and tin shop (1898-1917).	Yes	Petroleum and metals contamination.

*Surface and Subsurface Conditions*

Lot #	Block	Address	Phase I	Findings	Historic Information from Sanborn Maps	Phase II	RI Findings
37, 38, 39, 40, 41, 42, & 76	475	173-163 & 161 Nepperhan Ave.	Yes	Possible illegal dumping, unknown source or discharge point of PVC running across sites, and possible impacts from vehicle maintenance building adjacent to sites.	Historic dye manufacturing plant adjacent to parcels (1886)	No	CHURCH LOTS NOT PART OF BCP SITE soil.
7 & 9	483	153-149 New Main St.	Yes	Possible solvents	Historic furniture shop with possible use of solvents and leather manufacturing (1886-1896).	No	CVOCs in groundwater and metals in soil.
3, 14-18, 20, 21, 22, 24, 72, 80, 200-202	489/490	76 Broadway 207-209 New Main St 33-45 Guion St 92 South Broadway 100 South Broadway (Cacace Justice Center)	Yes		Historic evidence of metal works, a city maintenance shop, multiple auto repair shops, automobile painting, electronics manufacturing, and possible furniture manufacturing (1942).	No	Investigation of Cacace Site did not reveal contamination

Block 483 - The large parking lot (Lot 60) - historically this section of property once housed a brewery (1886-1917) in one section, a former industrial canal (1886), a livery and an undertaker (1898-1917), and an auto repair shop (1951-1956).

Corner of James Street and John Street - a silk thread manufacturer (1886-1898), a hat factory (1898-1917), and a bottling plant (1886-1917).

Corner of what used to be Engine Place and John Street - historically there was a hardware and tin smith (1886-1898) located here.

4. Proposed Mitigation

a. River Park Center - Remediation Under the Brownfield Cleanup Program

The implementation of the Brownfield Cleanup Program will mitigate the impacts of existing hazardous conditions at this Site. As a volunteer under the BCP, the Applicant will correct an environmental problem that has existed at River Park Center Site for many years. Completing this remediation will improve environmental conditions in this section of Yonkers. The remediation of the sediment in the river and river relocation will also improve the ecosystem of the river. See Natural Resources section. The remediation will be performed under NYSDEC and NYSDOH's oversight and in compliance with the stringent requirements of the BCP. The RAWP includes a Health and Safety Plan, Community Air Monitoring Plan, and Soil Management Plan, which will all be implemented to protection human health and the environment, including site workers and the community at large during the construction and remediation project.

b. Cacace Center – No Remediation Required

As noted above, there are no anticipated remediation requirements at this Site. However, to the extent unexpected remediation is required as a result of uncovering an unknown condition, the same stringent remediation work plan requirements will be implemented on this Site.

c. Palisades Point - Remediation Under the Bond Act Program

All required remediation at Palisades Point has been completed. The fill soils temporarily stored at Palisades Point on the surface of the ground will be moved to and beneficially used at the ATI site, which is under the control of the Applicant. Subsurface historic fill soils will be managed appropriately in accordance with the ROD and solid waste regulations.

d. Larkin Plaza

It is not yet known if environmental remediation of hazardous materials will be required at this Site. If such conditions do exist, the City will likely implement a cleanup under one of the State remedial programs under NYSDEC and NYSDOH oversight.

5. Short Term Impacts

There are a number of short-term impacts that relate to completing a BCP remedial action. However, all of these impacts will be managed during the process of completing site remediation, and most of are inseparable from impacts generally associated with the construction process. Many of these impacts related to dust and dirt potentially leaving the site, which can be mitigated using dust suppression and other mitigation procedures.

Some of the mitigation procedures planned to be implemented to mitigate these impacts are as follows:

a. Construction Entrance/Exit and Truck Wash

The remediation contractor will construct a stabilized construction entrance and exit area comprised of a clean gravel roadway. The public roadways surrounding the Project sites will be cleaned periodically, and on an as needed basis, with a street sweeper and water truck. A truck wash/decontamination pad will be constructed at the access area for each site. The tires and undercarriages of the trucks, along with equipment departing each site, will be pressure washed on the pad, and the wash water properly managed. Erosion and sedimentation control measures will be constructed and maintained in the decontamination area in accordance with a Soil Erosion and Sedimentation Control Plan.

b. Erosion Control Measures and Site Perimeter Security Fencing

Stormwater pollution prevention and erosion control measures will be implemented in conformance with a Soil Erosion and Sedimentation Control Plan.

c. Air Monitoring Stations

Fixed air monitoring stations will be established at locations along the perimeter to monitor for particulates (dust) and volatile organics using direct-reading and recordable instruments. The air monitoring stations will be operational during all remedial activities. The locations will be established in accordance with the approved Community Air Monitoring Plan, which is required by the BCP.

d. Dust Suppression

The remediation and construction activities will be monitored for dust generation and the need for dust suppression. Nuisance dust will be controlled with engineering controls, as required (e.g., use of water trucks and tarping of stockpiled soil). Preventative measures for dust generation include maintenance of the stabilized construction entrance and truck wash area, covering soil stockpiles, and limiting vehicle speeds.

6. Long Term Positive Environmental Benefits

Environmental remediation may cause short term nuisance dust impacts, which can be mitigated through the procedures noted above, but generates long term positive environmental benefits by permanent improvement of the environment through the removal of contamination. Such environmental benefits have already been realized at the Palisades Site, which is now a shovel ready site. The River Park Center site is a significantly contaminated site. The remediation of the Site and the river will result in a substantial environmental benefit to the River Park Center site itself, the river and the surrounding area. Similar long term environmental benefits will also be realized through the remediation, if required, and daylighting of the river.

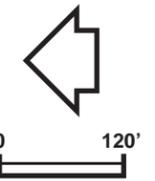
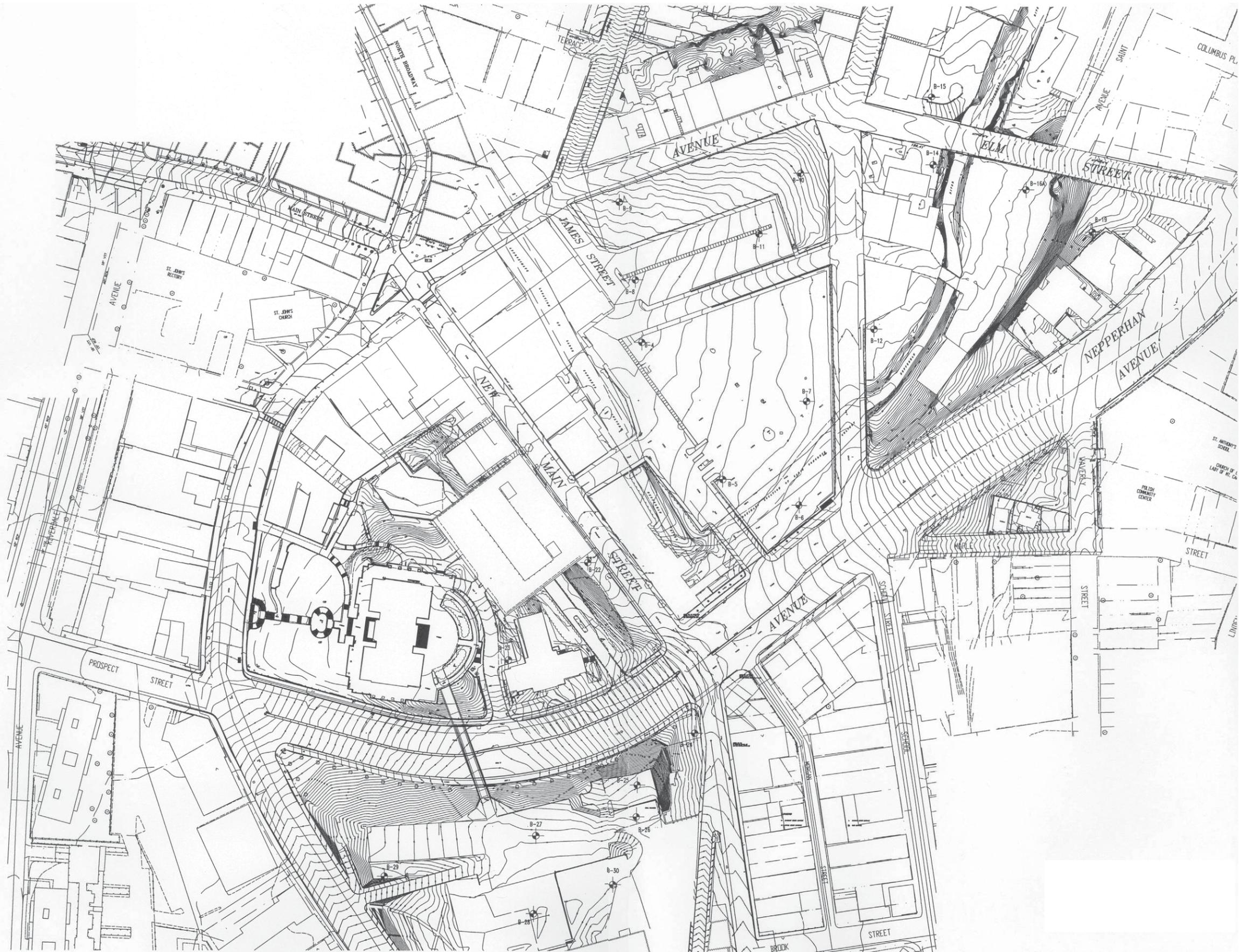


Exhibit III.L-1  
**BORING LOCATIONS**  
**SFC PHASE I PROJECTS**  
STRUEVER FIDELCO CAPPELLI LLC